Search for 09/034,336

```
     FILE 'WPIDS, USPATFULL, BIOSIS' ENTERED AT 11:04:43 ON 11 MAR 1999
L1      1246320 S INHIBIT?
L2      3436253 S REDUC?
L3        97202 S ANTIOXID?
L4        97734 S DEHYDRAT?
L5         6471 S TREHALOSE
L6        35507 S L1 (3A) L2
L7          229 S L6 (7A) L3
L8            0 S L7 (L) L5
L9       177045 S SUGAR
L10           3 S L7 (P) L9
L11         977 L1 (7A) L4
L12          10 L11 (L) L5
L13          10 DUP REMOVE L12 (0 DUPLICATES REMOVED)

=> d kwic bib 1-3

L10  ANSWER 1 OF 3  USPATFULL
DETD   (1) Following the procedure   ***of***   Reference   ***Example***
       ***70B***  ,   ***there***     ***is***   obtained (  ***3R***  ,
       ***4R***  )-3-[2-(2-  ***chloroacetamidothiazol***  -  ***4***
       -yl)-2methoxyiminoacetamido]-  ***4***  -n-butylthio-2-oxoazetidine.
AN     89:30104  USPATFULL
TI     1-Sulfo-2-oxoazetidine derivatives and their production
IN     Ochiai, Michihiko, Suita, Japan
       Matsuo, Taisuke, Ibaraki, Japan
PA     Takeda Chemical Industries, Ltd., Osaka, Japan (non-U.S. corporation)
PI     US 4822790  19890418
AI     US 81-326939  19811203 (6)
DCD    20050913
PRAI   WO 80-JP296  19801205
       WO 81-JP102  19810430
       WO 81-JP192  19810825
DT     Utility
EXNAM  Primary Examiner: Berch, Mark L.
LREP   Wenderoth, Lind & Ponack
CLMN   Number of Claims: 13
ECL    Exemplary Claim: 1,12,13
DRWN   No Drawings
LN.CNT 18192
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10  ANSWER 2 OF 3  USPATFULL
DETD   (1) Following the procedure   ***of***   Reference   ***Example***
       ***70B***  ,   ***there***     ***is***   obtained (  ***3R***  ,
       ***4R***  )-3-[2-(2-  ***chloroacetamidothiazol***  -  ***4***
       -yl)-2methoxyiminoacetamido]-  ***4***  -n-butylthio-2-oxoazetidine.
AN     89:30102  USPATFULL
TI     1-sulfo-2-oxozetidine derivatives and their product ion
IN     Kishimoto, Shoji, Takarazuka, Japan
       Matsuo, Taisuke, Ibaraki, Japan
       Ochiai, Michihiko, Suita, Japan
PA     Takeda Chemical Industries, Ltd., Osaka, Japan (non-U.S. corporation)
PI     US 4822788  19890418
AI     US 81-326938  19811203 (6)
PRAI   WO 80-JP297  19801205
       WO 81-JP103  19810430
       WO 81-JP183  19810821
       WO 81-JP252  19810924
```

DT Utility
EXNAM Primary Examiner: Berch, Mark L.
LREP Wenderoth, Lind & Ponack
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 18181
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 3 OF 3 USPATFULL
DETD NMR(DMSO-d.sub. ***6*** , ppm); ***1*** . ***10*** (***t*** , ***J*** =6 ***Hz*** , ***CH*** .sub.3), ##STR356## ***3*** . ***41*** (q,J= ***6*** Hz,--CH.sub.2 --), 3.56(m,--CH.sub.2 --), 3. ***90*** (m,--CH.sub.2 --), 4.64(d,J=4 Hz,C.sub.4 --H), 5.46(dd,J=4,8 Hz,C.sub.3 --H), ##STR357## 7.4(broad s,arom H), 9.06(d,J=8 Hz,NH), 9.18(broad s,NH), 9.93(d,J=6 Hz,NH).
AN 85:63880 USPATFULL
TI 1-Sulfo-2-oxoazetidine derivatives and their production
IN Matsuo, Taisuke, Ibaraki, Japan
Kishimoto, Shoji, Takarazuka, Japan
Ochiai, Michihiko, Suita, Japan
PA Takeda Chemical Industries, Ltd., Osaka, Japan (non-U.S. corporation)
PI US 4550105 19851029
AI US 81-326937 19811203 (6)
PRAI WO 80-JP297 19801205
WO 81-JP103 19810430
WO 81-JP183 19810821
WO 81-JP252 19810924
DT Utility
EXNAM Primary Examiner: Berch, Mark L.
LREP Wenderoth, Lind & Ponack
CLMN Number of Claims: 20
ECL Exemplary Claim: 1,5
DRWN No Drawings
LN.CNT 18339
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic ab bib 1-10

L13 ANSWER 1 OF 10 USPATFULL
SUMM . . . sorbitol and sucrose. Also included are other saccharides such as: adonitol, arabinose, dulcitol, galactose, inositol, maltose, mannitol, raffinose, roamnose, and ***trehalose*** The concentration range of the sugar or related compound can preferably be from about 0.1% to about 4%, and most. . . the concentration of the sugar or other related compound can be the concentration at which osmotic pressure would start to ***inhibit*** bacterial growth (osmotic pressure would ***dehydrate*** the bacterium). This concentration is likely to be variable dependent on the organism. Most bacteria are inhibited at solution concentrations. . .
AB The present invention relates to a method for correcting false susceptibility results in antimicrobial susceptibility tests for resistant microorganisms. This method comprises adding specific amounts of sugars, carbohydrates, related compounds or other ingredients to a test medium for such susceptibility tests.
AN 1999:12765 USPATFULL
TI Addition of lactose or other sugars in correcting false susceptibility results for resistant microorganisms in antimicrobial susceptibility

tests
IN Hejna, John M., Reisterstown, MD, United States
Karr, Gertrude M., Baltimore, MD, United States
Holliday, Denise R., Laurel, MD, United States
Brasso, William B., Columbia, MD, United States
Hammond, Patricia, Parkton, MD, United States
PA Becton Dickinson and Company, Franklin Lakes, NJ, United States (U.S. corporation)
PI US 5863751 19990126
AI US 96-724487 19960930 (8)
DT Utility
EXNAM Primary Examiner: Gitomer, Ralph
LREP Weintraub, Bruce S.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 264
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 2 OF 10 USPATFULL
DETD A cryoprotectant or anticoalescent compound may be added to the emulsion
prior to ***dehydration*** to ***inhibit*** flocculation and coalescence upon rehydration. The cryoprotectant may be of any type known in the art, including sugars and polysaccharides such as sucrose or ***trehalose*** , and nonnatural polymers such as polyvinylpyrrolidone. Cryoprotectants are usually present at less than 25%, commonly 10%, more commonly 5%, 4%. . .
AB The invention relates to an oil-in-water emulsion and related method for
administration of a drug to a mucosal surface. The emulsion has an aqueous continuous phase and a plurality of submicron particles having an average particle diameter of from 10 nm to 600 nm, with the particles
having a hydrophobic core of a fat or oil which is surrounded by a surfactant layer. The emulsion further includes a drug and a mucoadhesive polymer which is a polymer or copolymer of acrylic acid or methacrylic acid, a poly(methyl vinyl ether/maleic anhydride) copolymer,
pectin, alginic acid, hyaluronic acid, chitosan, gum tragacanth, karaya gum or carboxymethylcellulose. The hydrophobic core has less than 1% (w/w) protein, relative to the weight of the hydrophobic core, and the emulsion contains less than 5% (w/w) surfactant, relative to the weight of the hydrophobic core.
AN 1998:44900 USPATFULL
TI Bioadhesive emulsion preparations for enhanced drug delivery
IN Friedman, Doron, 33 Alon, Carmei Yosef, Israel
Schwartz, Joseph, 40 Benjamin Street, Rehovot, Israel
Amselem, Shimon, 38 Benjamin, Rehovot, Israel
PI US 5744155 19980428
AI US 93-106262 19930813 (8)
DT Utility
EXNAM Primary Examiner: Bawa, Raj
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1270
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 3 OF 10 USPATFULL
DETD A cryoprotectant or anticoalescent compound may be added to the

emulsion
prior to ***dehydration*** to ***inhibit*** flocculation and coalescence upon rehydration. The cryoprotectant may be of any type known in the art, including sugars and polysaccharides such as sucrose or ***trehalose*** , and nonnatural polymers such as polyvinylpyrrolidone. Cryoprotectants are usually present at less than 25%, commonly 10%, more commonly 5%, 4%. . .

AB The present invention provides emulsions comprising a plurality of submicron particles, a bioactive peptide, and an aqueous continuous phase or that effect enhanced oral bioavailability of the peptide. Another aspect of the invention provides compositions and methods of administering peptides in an emulsion comprising a plurality of submicron particles, a mucoadhesive macromolecule, a bioactive peptide, and an aqueous continuous phase, which promotes absorption of the bioactive peptide through mucosal surfaces by achieving mucoadhesion of the emulsion particles. Mucous surfaces suitable for application of the emulsions of the present invention may include corneal, conjunctival, buccal, sublingual, nasal, vaginal, pulmonary, stomachic, intestinal, and rectal routes of administration.

AN 96:38893 USPATFULL

TI Submicron emulsions for delivery of peptides

IN Friedman, Doron, Carmei Yosef, Israel
Schwarz, Joseph, Rehovot, Israel
Amselem, Shimon, Rehovot, Israel

PA Pharmos Corporation, New York, NY, United States (U.S. corporation)

PI US 5514670 19960507

AI US 93-106107 19930813 (8)

DT Utility

EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Prickril, Benet

LREP Pennie & Edmonds

CLMN Number of Claims: 39

ECL Exemplary Claim: 1

DRWN 7 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 869

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 4 OF 10 BIOSIS COPYRIGHT 1999 BIOSIS

AB Arbutin is a glycosylated hydroquinone found at high concentrations in certain plants capable of surviving extreme and sustained dehydration. In this paper, we examine a potential role of this molecule in anhydrobiosis.

We have studied its effects on the physical properties of phospholipids and on preservation of liposomes during drying. Arbutin depresses the get to liquid crystalline phase transition temperature of dry phospholipids, as measured by differential scanning calorimetry, with a pattern similar to that seen in phospholipids dried with the disaccharide ***trehalose*** . Unlike ***trehalose*** , however, arbutin does not protect dry liposomes from leaking their contents. Also, using Fourier transform infrared spectroscopy, we found an increase in the vibrational frequency of the phosphate asymmetric stretch in partially hydrated phospholipids in the presence of arbutin. ***Trehalose*** , by contrast, depresses the frequency of the phosphate in dry phospholipids, indicating that the modes of interaction of ***trehalose*** and arbutin with the bilayer are different. Previously, we have shown that phospholipases can be active in liposomes with surprisingly low water contents. Based on the structural similarity of arbutin to a known inhibitor of phospholipase A-2 (PLA-2), it appeared possible that arbutin might serve as an inhibitor of phospholipases. Liposomes of varying composition were lyophilized in the presence and absence of phospholipases. When the liposomes were partially rehydrated at 76%

relative humidity, arbutin inhibited PLA-2, but did not inhibit phospholipases B or C. Accumulation of enzyme product in the liposome membranes was measured by analytical thin layer chromatography, and was taken as a measure of enzyme activity. Arbutin did not inhibit any of the enzymes in the presence of excess water. Based on these data, hypotheses are presented concerning the mechanism of PLA-2 ***inhibition*** by arbutin in the mostly ***dehydrated*** state.

AN 1996:419395 BIOSIS
DN PREV199699141751
TI Arbutin inhibits PLA-2 in partially hydrated model systems.
AU Oliver, Ann E. (1); Crowe, Lois M.; De Araujo, Pedro S.; Fisk, Erika; Crowe, John H.
CS (1) Sect. Mol. Cell. Biol., Storer Hall, Univ. California, Davis, CA 95616
USA
SO Biochimica et Biophysica Acta, (1996) Vol. 1302, No. 1, pp. 69-78. ISSN: 0006-3002.
DT Article
LA English

L13 ANSWER 5 OF 10 USPATFULL
SUMM . . . and Vigneron, C., "Circular Dichroism Studies of Freeze-dried Induced Conformational Changes in Human Hemoglobin," Biopolymers, 22, 2367-2381, (1983)). The disaccharide ***trehalose*** has been shown in this work to be equally effective in retaining the functional oxygen binding characteristics of Hb as. . .
SUMM The ability of carbohydrates to maintain cell size during lyophilization is correlated to the ability of carbohydrates to ***inhibit*** ***dehydration*** . Previous work has demonstrated that ***trehalose*** , sucrose, and glucose (to a lesser degree) ***inhibit*** ***dehydration*** . This action may be due to the binding of carbohydrates to a cell wall or to a liposome (Crowe, L. M., Crowe, J. H., Rudolph, A. S., Womersley, C., and Appel, L., "Preservation of Freeze-dried Liposomes by ***Trehalose*** ," Arch. Biochem. Biophys., 242:1, 240-247, (I985); Crowe, J. H., and Crowe, L. M., "Effects of Dehydration on Membranes and Membrane. . .
SUMM . . . al., in U.S. Pat. No.4,915,951, provides a summary of articles and patents relating to the discovery of and development of ***trehalose*** as a cryopreservation agent. Baldschwieler et al. discloses a lipophilic anchor molecule to assist in introducing a carbohydrate to the. . .
AB The invention is directed to a composition comprising a permeabilizing agent, a preserving agent, and a buffered solvent. This composition is used to prepare the cells for lyophilization cells and to rehydrate the cells to recover them from lyophilization.

The process of this invention comprises adding the permeabilizing agent and the preserving agent in a buffered solution to red blood cells, agitating the combination for a period of time sufficient to allow permeation of the preserving agent into the cell, shell freezing the mixture, and lyophilizing the mixture. The dry lyophilized material can then be stored. The cells can be rehydrated using the same composition of permeability agent, preserving agent and buffered solvent.

AN 93:74174 USPATFULL
TI Method for the preservation of red blood cells by lyophilization using glycerol or inositol with disaccharides
IN Rudolph, Alan S., Bowie, MD, United States
Larry, Joseph P., South Bend, IN, United States
PA The United States of America as represented by the Secretary of the Navy, Washington, DC, United States (U.S. government)

PI US 5242792 19930907
AI US 91-659765 19910225 (7)
DT Utility
EXNAM Primary Examiner: Robinson, Douglas W.; Assistant Examiner: Saucier, S.
LREP McDonnell, Thomas E.; Edelberg, Barry A.
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 358
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 6 OF 10 USPATFULL
SUMM . . . ten years ago that certain organisms capable of surviving in a dehydrated state for many years produced large amounts of ***trehalose*** , a non-reducing disaccharide of glucose (Madin, K. A. C., and Crowe, J. H., Journal of Experimental Zoology, 193, 335-342 (1975), and Loomis, S. H., O'Dell, S. J., and Crowe, J. H., Journal of Experimental Zoology, 211, 321-330 (1980)). ***Trehalose*** was subsequently shown to be three times more effective than sucrose and several more times effective than other cryoprotectants in. . .
SUMM . . . phosphoglyceride molecules and thus to decrease the Van der Waals interactions among the acyl chains. During conditions of freezing and/or ***dehydration*** , this effect would tend to ***inhibit***

the processes of phase transition and phase separation which produce membrane fusion and cellular damage.
AB Compositions for cryopreservation of phosphoglyceride-containing biological and synthetic membranes are provided in which a lipophilic anchor molecule is modified by the attachment of a preferably carbohydrate moiety placed at a predetermined, variable distance from the hydrophobic portion of the molecule by means of a hydrophilic linker
unit. A method for the use of the compositions is also provided.
AN 91:100114 USPATFULL
TI Cryoprotective reagent
IN Baldeschwieler, John D., Pasadena, CA, United States
Goodrich, Jr., Raymond P., Pasadena, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 5071598 19911210
AI US 89-448803 19891211 (7)
DCD 20070410
RLI Division of Ser. No. US 87-128152, filed on 3 Dec 1987, now patented, Pat. No. US 4915951
DT Utility
EXNAM Primary Examiner: Lovering, Richard D.; Assistant Examiner: Covert, John
M.
LREP Sarjeant, John A.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 336
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 7 OF 10 USPATFULL
SUMM . . . ten years ago that certain organisms capable of surviving in a dehydrated state for many years produced large amounts of ***trehalose*** , a non-reducing disaccharide of glucose (Madin, K. A. C., and Crowe, J. H., Journal of Experimental Zoology, 193, 335-342 (1975), and Loomis, S. H., O'Dell, S. J., and Crowe, J. H., Journal of

Experimental Zoology, 211, 321-330 (1980)). ***Trehalose*** was subsequently shown to be three times more effective than sucrose and several more times effective than other cryoprotectants in. . .

SUMM . . . phosphoglyceride molecules and thus to decrease the Van der Waals interactions among the acyl chains. During conditions of freezing and/or ***dehydration*** , this effect would tend to ***inhibit***

the processes of phase transition and phase separation which produce membrane fusion and cellular damage.

AB Compositions for cryopreservation of phosphoglyceride-containing biological and synthetic membranes are provided in which a lipophilic anchor molecule is modified by the attachment of a preferably carbohydrate moiety placed at a predetermined, variable distance from the hydrophobic portion of the molecule by means of a hydrophilic linker

unit. A method for the use of the compositions is also provided.

AN 90:27763 USPATFULL

TI Cryoprotective reagent

IN Baldeschwieler, John D., Pasadena, CA, United States
Goodrich, Jr., Raymond P., Pasadena, CA, United States

PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)

PI US 4915951 19900410

AI US 87-128152 19871203 (7)

DT Utility

EXNAM Primary Examiner: Lee, Mary C.; Assistant Examiner: Scalzo, Catherine S.
Kilby

LREP Ashen Golant Martin & Seldon

CLMN Number of Claims: 3

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 310

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 8 OF 10 BIOSIS COPYRIGHT 1999 BIOSIS

AB We have investigated the role that stabilization of proteins in solution by organic solutes plays in stabilizing labile enzymes during air-drying. Phosphofructokinase (PFK) was dehydrated to various water contents and rehydrated, and the resulting enzyme activity was then measured. When 60% of the water was removed, 30% of the initial enzyme activity was lost. This loss in activity was clearly due to changes in solution properties during dehydration, since it occurred in excess water. No activity was measurable following dehydration to only 3% of the initial water content. This final loss in activity was attributed to dehydration of the protein. Inactivation at any stage of air-drying was irreversible. In the presence of 100 mM ***trehalose*** , by contrast, there was no loss of enzyme activity induced at any stage of the progressive desiccation. Similar results were seen with 100 mM sucrose or maltose or with 200 mM glucose, but the degree of protection was less. Addition of 0.6 mM ZnSO4 to glucose/PFK solutions enhanced the protection provided by the sugar. Glycerol, proline, and trimethylamine N-oxide protected PFK until up to 90% of the initial water was removed, but not against complete ***dehydration*** . Sugars and the other organic solutes ***inhibited*** pH-induced dissociation of PFK, indicating that these solutes have a more generalized capacity to stabilize this protein in solution. We conclude that the capacity of sugars to stabilize labile enzymes in solution is a prerequisite for the maintenance of catalytic activity when water is removed by air-drying, but that this effect is not in itself sufficient to stabilize fully dried proteins. We suggest that the capacity of sugars to preserve dried PFK may be dependent on the

binding of the sugar to the protein during the final stages of dehydration.
AN 1989:34054 BIOSIS
DN BA87:22054
TI MODES OF STABILIZATION OF A PROTEIN BY ORGANIC SOLUTES DURING DESICCATION.
AU CARPENTER J F; CROWE J H
CS DEP. ZOOL., UNIV. CALIF., DAVIS, CALIF. 95616.
SO CRYOBIOLOGY, (1988) 25 (5), 459-470.
CODEN: CRYBAS. ISSN: 0011-2240.
FS BA; OLD
LA English

L13 ANSWER 9 OF 10 BIOSIS COPYRIGHT 1999 BIOSIS
AB In this report, the ability of carbohydrates (***trehalose*** , sucrose, and glucose) to preserve the blood substitute liposome-encapsulated hemoglobin (LEH) in the freeze-dried state is examined. The water-free stabilization of individual components of this blood substitute and LEH is reported. Lyophilization of hemoglobin solutions in the absence of carbohydrates results in significant oxidative degradation of Hb as measured by a large increase (approximately 60%) in methemoglobin. Hb samples lyophilized in increasing carbohydrate concentrations show reduced levels of methemoglobin, and at 0.5 M ***trehalose*** , sucrose, or glucose, these levels are reduced to nearly the same levels as unlyophilized controls. Storage of lyophilized Hb samples following rehydration at 4.degree. C shows the same rate of methemoglobin formation regardless of whether carbohydrates are present. This suggests that carbohydrates prevent Hb oxidation in the dry state but are less effective at retarding oxidative damage to Hb in solution. The addition of 0.25 M ***trehalose*** or sucrose to LEH results in the maintenance of liposomal size following lyophilization. In these experiments, glucose was least effective at ***inhibiting*** ***dehydration*** -induced LEH fusion. Lyophilization of LEH in 0.25 M ***trehalose*** or sucrose also results in significantly greater retention of the encapsulated hemoglobin following lyophilization and rehydration. These results suggest that the long-term stabilization of LEH in the dry state is a realizable goal.
AN 1988:435980 BIOSIS
DN BA86:88078
TI THE FREEZE-DRIED PRESERVATION OF LIPOSOME ENCAPSULATED HEMOGLOBIN A POTENTIAL BLOOD SUBSTITUTE.
AU RUDOLPH A S
CS BIOMOL. ENGINEERING BRANCH, CODE 6190, NAVAL RES. LAB., WASHINGTON, DC 20375-5000.
SO CRYOBIOLOGY, (1988) 25 (4), 277-284.
CODEN: CRYBAS. ISSN: 0011-2240.
FS BA; OLD
LA English

L13 ANSWER 10 OF 10 BIOSIS COPYRIGHT 1999 BIOSIS
AB The relative abilities of a number of naturally occurring carbohydrates to ***inhibit*** ***dehydration*** -induced fusion between palmitoyloleoylphosphatidylcholine:phosphatidylserine (85:15) large unilamellar vesicles have been studied. Fusion events were quantified using a fluorescence resonance energy transfer technique. ***Trehalose*** was most effective at inhibiting fusion (0.4 g/

trehalose /g lipid showed 30% probe intermixing), followed by maltose (60% intermixing), fructose (60%), sucrose (70%), glucose (80%), cellobiose, glycerol, raffinose, and myo-inositol (90%). The relative abilities of these carbohydrates to inhibit fusion correlate directly with their abilities to interact with phospholipids, maintain bilayer fluidity, and preserve biological membranes. The results are discussed in relation to the crystalline structure of the carbohydrates and their possible influence on level of interaction with phosphate head groups.

AN 1986:355731 BIOSIS
DN BA82:60205
TI INHIBITION OF DEHYDRATION-INDUCED FUSION BETWEEN LIPOSOMAL MEMBRANES BY CARBOHYDRATES AS MEASURED BY FLUORESCENCE ENERGY TRANSFER.
AU WOMERSLEY C; USTER P S; RUDOLPH A S; CROWE J H
CS DEP. ZOOL., UNIV. HAWAII, HONOLULU, HAWAII 96822.
SO CRYOBIOLOGY, (1986) 23 (3), 245-255.
CODEN: CRYBAS. ISSN: 0011-2240.
FS BA; OLD
LA English

STN INTERNATIONAL LOGOFF AT 11:15:49 ON 11 MAR 1999